

IN THE CLAIMS:

Please reconsider the claims as follows:

1. (previously presented) An optical communication system, comprising:

a transmitter, including:

a means for modulating an optical carrier in a sequence of return-to-zero (RZ) pulses;

a modulator for modulating an optical phase of said pulses in accordance with an input digital data stream to form an optical phase modulated signal; and

a means for applying the optical phase modulated signal to a dispersion managed optical transmission link;

a dispersion managed optical transmission medium; and

a receiver of the optical phase modulated signal.

2. (previously presented) A optical communication system comprising:

a means for modulating an optical carrier in a sequence of return-to-zero (RZ) pulses;

a modulator for modulating an optical phase of said pulses in accordance with an input digital data stream to form an optical phase modulated signal; and

a means for applying said signal to a dispersion managed optical transmission link.

3. (cancelled)

4. (previously presented) The invention defined in claim 2 wherein said modulator is a phase shift keying (PSK) modulator.

5. (previously presented) The invention defined in claim 2 wherein said modulator is a differential phase shift keying (DPSK) modulator.
6. (previously presented) The invention defined in claim 2 wherein said modulator is a quadrature phase shift keying (QPSK) modulator.
7. (previously presented) The invention defined in claim 1 wherein said medium is a long haul transmission medium adapted for transmitting solitons.
8. (previously presented) The invention defined in claim 1 wherein said medium is adapted for transmitting pulses that disperse as they propagate along the medium.
9. (previously presented) The invention defined in claim 1 wherein said transmitter further includes a wavelength division multiplexer adapted to combine an output signal of said modulator with other optical phase modulated signals having optical carriers with different wavelengths.
10. (previously presented) The invention defined in claim 2 wherein said modulator is a LiNbO₃ phase modulator.
11. (previously presented) The invention defined in claim 2 wherein said modulator is a LiNbO₃ Mach-Zehnder phase modulator.
12. (previously presented) The invention defined in claim 1 wherein said receiver includes a delay demodulator.

13. (previously presented) The invention defined in claim 1 wherein said receiver includes a balanced receiver for recovering said input data from the phase modulated signal.

14. (cancelled)

15. (previously presented) The invention defined in claim 1 wherein said transmission medium includes discrete or distributed means of erbium-doped fiber amplification (EDFA) or Raman amplification.

16. (previously presented) A method of optical communications, comprising the steps of:

modulating an optical carrier signal in a sequence of return-to-zero (RZ) pulses;

modulating an optical phase of said pulses in accordance with an input digital data stream to form an optical phase modulated signal;

applying said signal to a dispersion managed optical transmission link; and

transmitting said signal to a designated receiver via a dispersion managed optical transmission medium.

17-18. (cancelled)